

Message

---

**From:** Dan Pope [DPope@css-inc.com]  
**Sent:** 4/19/2017 7:31:24 PM  
**To:** Davis, Eva [Davis.Eva@epa.gov]; Cosler, Doug [DCosler@TechLawInc.com]; Wayne Miller [Miller.Wayne@azdeq.gov]; Steve Willis [steve@uxopro.com]; Bo Stewart [Bo@Praxis-Enviro.com]; Jennings, Eleanor [Eleanor.Jennings@parsons.com]; Brasaemle, Karla [KBrasaemle@TechLawInc.com]; d'Almeida, Carolyn K. [dAlmeida.Carolyn@epa.gov]  
**Subject:** RE: Phased implementation of EBR  
**Attachments:** EBR path forward-DFP.docx

A few quick comments in the attached file.

---

**From:** Davis, Eva [mailto:Davis.Eva@epa.gov]  
**Sent:** Wednesday, April 19, 2017 12:25 PM  
**To:** Dan Pope; Cosler, Doug; Wayne Miller; Steve Willis; Bo Stewart; Jennings, Eleanor; Brasaemle, Karla; d'Almeida, Carolyn K.  
**Subject:** FW: Phased implementation of EBR

All –

Loren and I have put together a short response to the AF that is to be sent via email today with a path forward for a phased approach to EBR, that would hopefully give us the information we need to determine if it could work. There are a couple of 'placeholders' there for input from the microbiologist – please help me out. I'm requesting a quick turnaround on this, it is to go to the AF today.

Thanks Eva

---

**From:** Henning, Loren  
**Sent:** Wednesday, April 19, 2017 12:19 PM  
**To:** Davis, Eva <Davis.Eva@epa.gov>  
**Cc:** d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>  
**Subject:** RE: Phased implementation of EBR

Thanks Eva. This looks good. I wouldn't make it much longer. Please get the necessary info from the microbiologists so I can send this to AF today.

Loren

---

**From:** Davis, Eva  
**Sent:** Wednesday, April 19, 2017 7:42 AM  
**To:** Henning, Loren <Henning.Loren@epa.gov>  
**Cc:** d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>  
**Subject:** RE: Phased implementation of EBR

Loren – I moved this to a word document to make it easier for the rest of the team to make changes - of course then it can be copied and pasted back into an email. I hope this is the type of information you were looking for – it definitely though needs input from the microbiologists. You know, if they throw out the approach they have in Addendum #2, and go back to the approach outlined in the May 2014 Final Work Plan, we would be a lot closer to allowing them to test it in a larger area -

---

**From:** Henning, Loren  
**Sent:** Tuesday, April 18, 2017 3:44 PM  
**To:** Davis, Eva <[Davis.Eva@epa.gov](mailto:Davis.Eva@epa.gov)>  
**Subject:** Phased implementation of EBR

Here's what I am proposing as a start:

The US Environmental Protection Agency (EPA) and Arizona Department of Environmental Quality (ADEQ), "The Agencies", are in receipt of your February 10, 2017 letter stating Air Force's (AF's) intention to move forward with implementation of the Enhanced Bioremediation (EBR) work plan for ST12, despite the objections raised in our letter to you dated February 8, 2017 and the January 25, 2017 technical responses sent to Cathy Jerrard. The Agencies understand the AF's desire to move forward with implementation of EBR, however, our technical staff still have concerns about some of the basic information on how EBR will be implemented and evaluated as a viable treatment technology. In order to prevent potential long-term adverse impacts from EBR, the Agencies recommend implementing EBR in a phased approach.

The AF, with input provided by the regulatory agencies, would select two location to implement EBR; one location would be in an area of high LNAPL concentration, and another area to be determined. We propose that the primary measure of effectiveness of EBR would be reduction of Benzene concentrations in groundwater. Other measures can be added as appropriate. Empirical data collected before and during implementation of EBR would be used to evaluate its efficacy, and would be the basis for optimizing the system if appropriate.